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WHO WERE THE MOUND BUILDERS?

JOHN G. KEPLINGER.

Lord Avebury, in his most interesting volume, "Prehistoric Times", tells us of a number of interesting remains of this ancient people who, at one time, occupied much of the Mississippi Valley.

Let us refer to them. Many of these mounds are or were located in Ohio. These consisted of squares, oblongs, circles and animal shaped mounds. "The city of Circleville, Ohio," he tells us, "takes its name from one of these embankments which, however, was no more remarkable than any of the others. This particular figure consisted of a square and a circle which touched each other. The sides of the square," he states, "were *about* 900 feet in length and the circle a little more than 1000 feet in diameter. The circle was peculiar in that it had a double embankment."

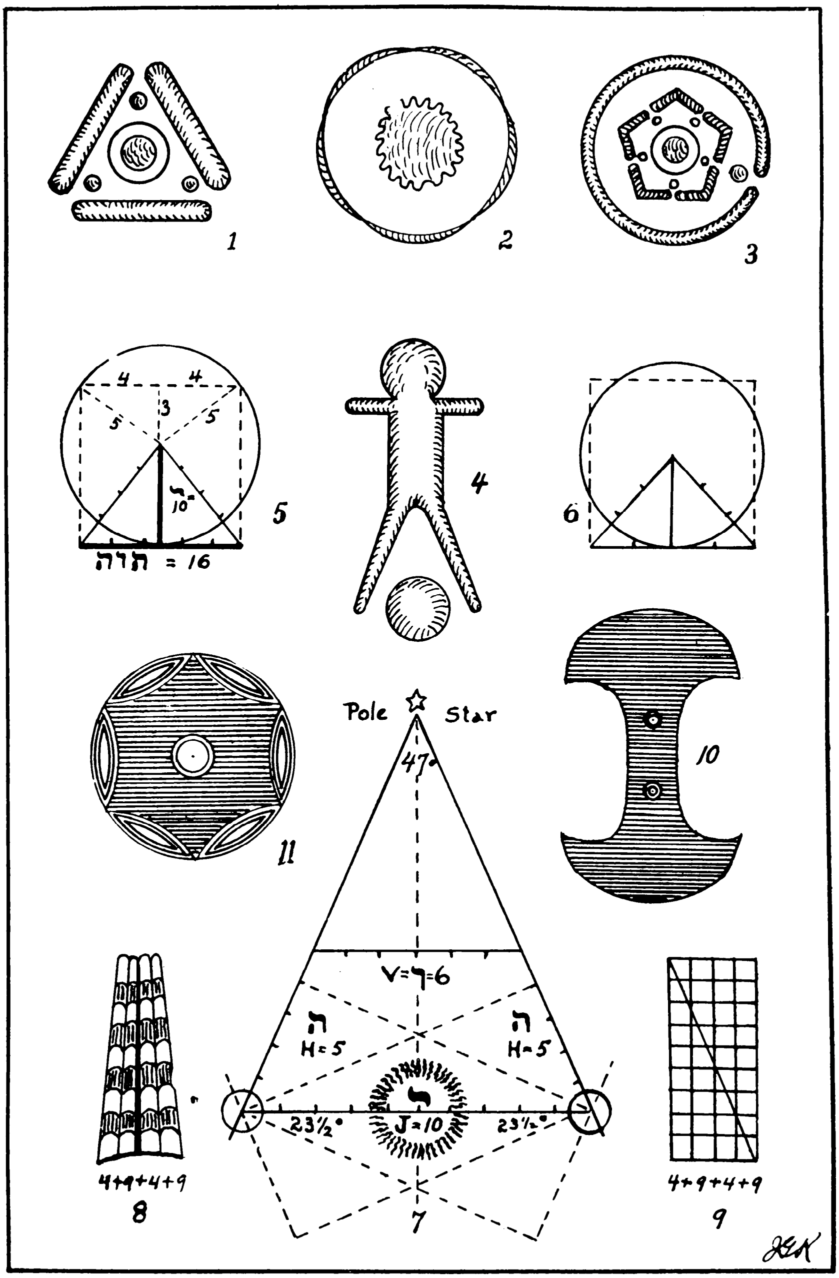
Let us note before going farther that the measurements given by Lord Avebury are not exact. The sides of the square were *about* 900 feet in length while the diameter of the circle measured *a little more* than 1000 feet. Now, if we determine the area of the square we find that it contained 810,000 square feet while a circle with a diameter of 1015 feet— *a little more than a 1000 feet*—contains 809,138 square feet.

Lord Avebury also refers to five or six figures which were *"exact" squares,* each side of which measured 1080 feet—"a coincidence which," he says, "could not have been accidental and which must possess some significance. The circles also, in spite of their great size, are so nearly round, that the American archaeologists consider themselves justified in concluding that the mound-builders must have had some standard of measurement, and had some means of determining angles."

To prove that these various figures, mounds and embankments were made after a standard of measurement and did have a wonderful significance is the purpose of this paper.

To quote Lord Avebury further. "Not the least remarkable of American antiquities are the so-called Animal Mounds, which are principally though not exclusively found in Wisconsin. In this district occur thousands of examples of gigantic basso-relievos of men, beasts, birds and reptiles, all wrought with persevering labor on the surface of the soil. ****One remarkable group in Dale County, consists of a man with extended arms. The length of the human figure is 125 feet and it is 140 feet from the extremity of one arm to that of the other. *** Even more remarkable is the great serpent mound in Adams County, Ohio." "It is situated on a high spur of land which rises 150 feet above Brush Creek. Conforming to the curve of the hill, and occupying its very summit, is the serpent, its head resting near the point, and its body winding back for 700 feet, in graceful undulations, terminating in a triple coil at the tail. The entire length, if extended, would be not less than 1000 feet. The work is clearly and boldly defined, the embankment being upwards of five feet in height, by 30 feet base at the center of the body, but diminishing somewhat toward the head and tail. The neck of the serpent is stretched out, and slightly curved, and its mouth is opened wide, as if in the act of swallowing or ejecting an oval figure which rests partially within the distended jaws. This oval is formed by an embankment of earth, without any perceptible opening, 4 feet in height and is perfectly regular in outline, its transverse and conjugate diameters being 160 and 80 feet respectively."

In Switzler's History of Missouri, published in St. Louis, in 1879, the author states that geometrical mounds appear frequently in Iowa, but formerly were found in greatest numbers in Missouri. I have copied four of Switzler's illustrations and will quote his comments upon them. "Mound (Fig. 1) was located on Root River, about 20 miles west of the Mississippi River. The central mound is represented as being 36 feet in diameter and 12 feet in height. The circle enclosing it was nearly obliterated. The long embankments which formed the sides of the triangle were each 144 feet in length, and respectively 3, 4 and 5 feet in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height and 12 feet in diameter, and what is singular, the sum of the heights of the embankments equals the vertical height of the central mound and these two amounts multiplied together give us the exact length of the embankments."

Mounds (Figures 2 and 3) he writes, "were located on the Kickapoo River, in Wisconsin. The central work of mound number two, with its radiating points is three feet in height and 60 feet in diameter. This is enclosed by five crescent shaped works having an elevation of two feet and all present a level surface at the top. The sacred pentagon (Fig. 3) is found in close proximity."

On page 23 of his history Switzler shows an illustration of a man-shaped mound (Fig. 4) similar to that described by Lord Avebury, but does not give its location.

During the summer of 1919 I sent copies of these illustrations to Mr. Frank C. Higgins, F. R. N. S., of New York, who, at that time was preparing an article for the New York Herald on the "History of Freemasonry in Prehistoric America." In this article published in the July 6, 1919, issue Mr. Higgins makes the following comments on these mounds.

Mound (Fig. 1) "This is pure Egyptian sacred geometry, embracing the Pythagorean 3-4-5 proportion and the equally significant formula of 3 times 12; 4 times 12 and 5 times 12, which, multiplied together equal 103,680 or four precessional cycles of 25,920 years each. As this same problem is found in Egypt, Greece and India, its ubiquity is certain. The number 36, of the central mound is the ancient Pythagorean number of the sun."

Mound (Fig. 4) "Switzler unconsciously exhibits a mound illustrative of the famous ancient figure of the divine man, or Macrocosmos, filling the manifested universe, with the legs placed at an angle of 47 degrees, and with the sun between the feet."

Mounds (Figures 2 and 3) "Pentagonal, hexagonal, octagonal and oblong mounds in the Egyptian sacred proportions, as well as the great serpent mound of Ohio, presenting the Hindoo myth of the serpent and the egg, are also striking proofs of the spread of the ancient wisdom."

The ancient wisdom referred to by Mr. Higgins is the cosmic science of the ancient priesthoods of all the culture nations of antiquity. This science was embodied in signs and symbols which we of today find carved on their coins, tombs, monuments and temples. A thorough knowledge of the meaning of these symbols will take us far along the way to an understanding of the remains bequeathed to us by the prehistoric peoples of our own land.

In one of his Herald articles Mr. Higgins shows that a star of cosmical proportions could be drawn on or close to the 30th parallel of north latitude and that the points would touch centers of ancient civilization and learning. The first of these centers was in Egypt and was marked by the Great Pyramid; the second was at Lhassa, in Tibet, the seat of the grand Lama; the third on Ganges Island in the Pacific; the fourth in Hawaii; the fifth in Yucatan and the sixth in Atlantis.

The first of these centers is of interest to us in our present quest, for here we find the Great Pyramid, which we are told was built as an altar to Jehovah. This statement we find in Isaiah 19:19-20, where we read that "in that day shall there be an altar to the Lord in the midst of the land of Egypt, and a pillar at the border thereof to the Lord. And it shall be for a sign and a witness unto the Lord of hosts in the land of Egypt." No inscriptions have been found in this vast monument which has stood as a witness since 2170 B. C., but measurements show that its vertical height is to each of the sides of its base as 10 is to 16. See Fig. No. 5.

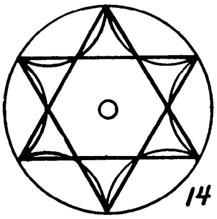
The figure formed by the vertical height and base line of the Great Pyramid is the Tau cross of the Egyptians as well as of the Hebrews and represents the name Jehovah geometrically. To explain this properly we must refer to the gematria or number-letter philosophy of the ancients. The Hebrews had no numerical characters as we have. Numerical values were expressed by letters of the alphabet. Thus aleph was 1; beth, 2; gimel, 3; daleth, 4; heh, 5; vav, 6; zain, 7; cheth, 8; teth, 9; and yod, 10. After yod the succeeding letters stood for 20, 30 and upwards by tens until 100, after which the succeeding letters rose by hundreds. The Hebrews omitted the use of vowels. Hence the name Jehovah was expressed by four letters—yod, heh, vav and heh or, in English JHVH, whose combined numerical value is 10 plus 5 plus 6 plus 5 or 26.

The Great Pyramid has long been regarded as a great repository of astronomical, mathematical and geometrical science. For our purpose it is sufficient to show that the vertical height of ten parts is the radius of a circle whose outline or perimeter is equal to the perimeter of the square drawn on the base of 16 parts. (Fig. 5.) This is the first squaring of the circle as known by the ancients and this was always represented by the vertical section of this great structure. The apex of this triangle measures 77 degrees and the two lower angles 51½ degrees each. This triangle was also represented with a base of 5 parts and sides of four. Five plus four gives us nine, the lowest common factor of 36—the Pythagorean number of the sun. See Fig. 5. Now, there is another squaring of the circle—(Fig. 6) that of area—an example of which we have in the Circleville, Ohio, mounds. The symbol of this geometrical proposition is a triangle with an apex of 86 degrees while the other two angles are 47 degrees each. This triangle was frequently represented as having a base of four parts and sides of three. Four plus three gives us 7, or the lowest common factor of 28, the ancient number of the moon. The vertical height of this second triangle is the radius of a circle whose area is the same as that of a square drawn on a base of four parts.

There is another angle which must be considered in tracing out the cosmic science of antiquity. The ancients knew, as we do, that the earth's axis inclines at an angle of 23½ degrees to the pole of the ecliptic, as will be seen in Figure 7. During the precessional cycle of 25,920 years the changing position of the earth causes it to describe a cone of 47 degrees in space and this figure the prehistoric inhabitants of the central west embodied in figure of the cosmic man illustrated in figure 4. If, now, we divide the base line of figure 7 into ten parts and lay off five such parts on each of the sides we find that the line at the top of the rhomboid is exactly equal to six parts of the base. Thus, we again have 10-5-6-5 or 26, the numerical value of the name Jehovah and in this instance, in cosmical proportions. We know that the ancient Egyptians knew of these facts and represented this rhomboidial form in the placing of the arms on the statues of Osiris, who esoterically stood for Jehovah. Again 26, or the numerical value of the name Jehovah was expressed by another geometrical symbol (Fig. 8) employed not only as the crown of the Sun-god Ra in Egypt but in the temple sculptures of Palenque, in Yucatan. This is an oblong four parts wide by nine parts long. A line drawn diagonally across this figure (No. 9) will yield two angles of 23½ degrees each. By adding the digits of the four sides we have 26 for 9 plus 4 plus 9 plus 4 equal 26 or JHVH.

With these angles in mind let us now consider the relation of some of these figures to the remains of the Mound Builders. In Moorehead's two volumes "The Stone Age in North America" we find a number of stone forms illustrated and of these nothing seems to be known. They are generally called ceremonials or problematical forms. The first which attracted my attention (Fig. 10) was that of a form of cannel coal. This object was found on the chest of a skeleton in a gravel pit in Mercer County, Ohio. The original measures nearly nine inches in length and is in the Phillips Academy collection at Andover, Mass. By taking the two holes as centers and following the arcs we get two circles which cut each other at I and J. (Fig. 12). If, then, we connect these points with the middle of each original arc we have two triangles IAJ and IBJ which are *precisely* the same as that of the vertical section of the Great Pyramid and which not only gives us the squaring of the circle as to outline but the name Jehovah as well. Now, if we connect the points CDEF with the center of the figure we get two triangles which are *precisely* the same as the 86 degree triangles shown in figure No. 6 and which give us the squaring of the circle as to area. In this figure we also find the vescica pisces, which has also to do with the squaring of the circle as well as being a prominent figure in Christian art.

The squaring of the circle was universally regarded as the supreme demonstration of the cosmic law of material manifestation, "the foundation of which," says Higgins, "is the relation between angle and curve taken at their most perfect expression of equilibrium, the Square and the Circle. The angles of the first exactly balanced between the *acute* and the obtuse and the contour of the second returning upon itself with unerring pre-



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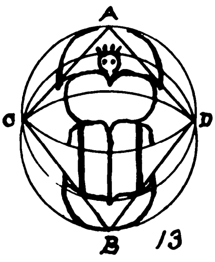

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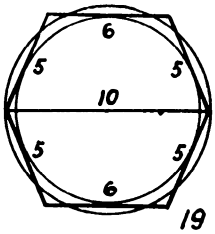

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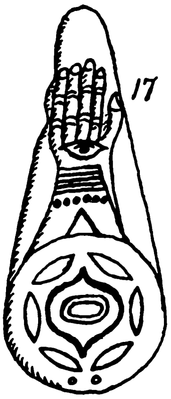

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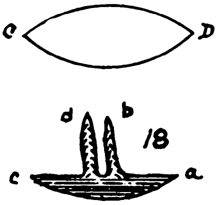

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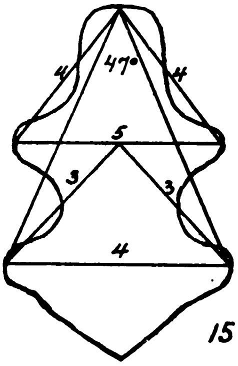

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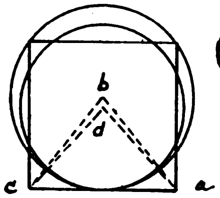

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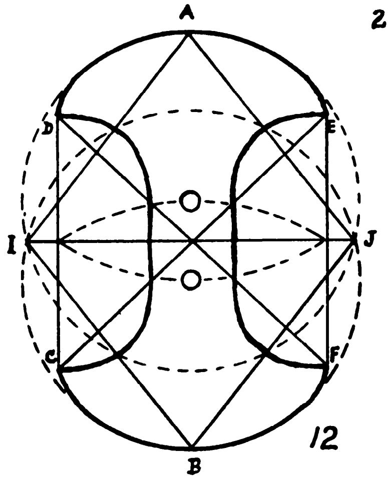

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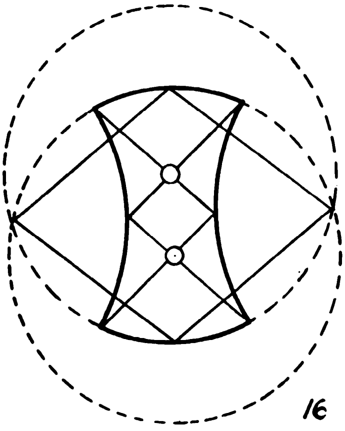

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cision. The wonderful laws uniting and connecting these two basic figures in a chain of identities and correlations of which the geometer never tires, are the ground work of Cosmos." A demonstration similar to that of No. 12 is shown in the outline drawing Fig. 13) of an Egyptian scarab taken from "The Word". Geometrical analysis shows that this also contains the highly significant 77 and 86 degree angles.

In the Illinois State Museum collection, in Springfield, there is a circular slate ornament which was found in a mound in Greene County, Illinois. (Fig. 11.) This object was originally coated with copper, some of which remains. The chord connecting each of the points with the one next to it is the same length as the radius of the circle. If we connect the opposite points as in figure 14 we have the Mogun Dovid, the shield of David, or the six pointed star of the Hebrews, which to them represented the union of spirit and matter. This object brings to mind Mr. Higgins' six pointed star of cosmical proportions.

The original of Fig. 15 is nearly five and a half inches long and three and one-half broad. Geometrical analysis shows that it also contains three important cosmic angles, one of 77, another of 86 and still another of 47 degrees.

Figure No. 16 illustrates a more or less common type of gorgets or ceremonial stones and pendants. Analysis shows these also contain the 77 and 86 degree angles.

Figure No. 17 is a copper pendant found in a mound at Moundville, Alabama. This is clearly astronomical in character for the eye and six dots above the 47 degree cone or angle are the stars in the Great Bear or Big Dipper. The eye is frequently represented as emblematical of the pole star as well as of the sun and moon. The hand is the letter yod and anciently was a universal symbol for Jehovah. The long projection represents the celestial cone over the circular earth which it will be seen is represented by a circle divided into six parts. This, like a preceding figure, makes one think of the six pointed star of cosmical proportions.

Figure No. 18 is taken from a plate on page 218, Vol. II of Moorehead's work in which he illustrates a number of copper crescents which are in the collection of the Wisconsin Archeological Society. Two of these are of particular interest and are marked F and E on the plate. As each so-called crescent yields circles of equal perimeter and area—see figures 19 and 20—we will use F, the better preserved of the two forms for our demonstration. The distance between the points a and b (Fig. 18) is the radius of a circle whose perimeter or outline is equal to a square—one side of which is the distance between c and a—see figure 20. The distance between c and d is the radius of a circle whose area is equal to the same square. If, now, we connect the centers of these circles with the two lower corners of the completed square we will find that one of the triangles—c-b-a—has a base of five parts and two sides of four each and that the other triangle—c-d-a—has a base of four parts and two sides of three each, thereby showing that the copper crescents referred to above are the squares and compasses of the ancient Mound Builders.

In Figure 19 we have drawn the circles of equal perimeter and equal area with a common center. Divide the diameter of the perimeter circle into ten parts and lay off five parts on each of the lines drawn tangent to the area circle up or down from the extremities. The lines at the top and bottom which connect the side lines will also be tangent to the area circle and will each measure exactly six parts. Add these amounts together and we have 10 plus 5 plus 6 plus 5 or JHVH (JeHoVaH), exactly as it is expressed in a similar form in the ancient East. Continue the side lines until they meet and the angles at their meeting points will be exactly 47 degrees.

Investigation along these lines has just begun but the results so far obtained conclusively demonstrate that the Mound Builders were thoroughly familiar with the cosmic science of the ancient world, the principles of which they represented, as did the other highly cultured peoples of antiquity, in the geometrical figures—circles, squares, triangles, oblongs and ellipses of their ceremonial objects and mounds. This cosmic science is unchangeable and the universality of these precise geometrical angles is evidence that the ancient dwellers of the central west were in communication with other highly developed peoples and that they worshipped the same Jehovah as did the builders of the Great Pyramid.